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UNITED STATES DEPARTMENT OF AGRICULTURE  
Bureau of Entomology and Plant Quarantine  
Washington, D.C.

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OCT 31 1934

Developments in the Japanese beetle situation  
during 1934.

October 20, 1934.

The accompanying statement summarizes the results of the season's scouting to obtain timely information as to the distribution of the Japanese beetle. To it is attached, as part of the record, the trapping report by States; also comparative data, where available, of beetle catches in this and previous seasons.

The work of the season indicates that with the exception of three localities the beetle has not become established in any place outside the present regulated areas. The capture of a few beetles at certain points outside the regulated area does not mean that an infestation is established, and extension of the quarantine to cover such localities may safely be postponed, as in previous years. In the three places where infestation is established (St. Louis, Mo., Indianapolis, Ind., and Charlottesville, Va.), extensive control programs are under way which, with other safeguards, will be adequate to prevent spread from these sections. There is, therefore, no need for the extension of the regulated area and no quarantine hearing will be held this year to consider extension of the area or modification of the regulations. The accompanying statement will serve the same purpose as the report usually given at quarantine hearings by making available to State quarantine officers and others the latest information as to the distribution of this insect.

LEE A. STRONG,  
Chief of Bureau.



## DEVELOPMENTS IN THE JAPANESE BEETLE SITUATION DURING 1934

The most outstanding first-record find of the Japanese beetle at a point remote from the infested areas is that disclosed at St. Louis, Mo., where beetles were collected in such numbers as to indicate an established infestation. Another first-record find consisted of 17 beetles caught at Indianapolis, Ind., in a residential section of the city at some distance from a railroad line. This infestation probably resulted from illegal transportation of infested plant material. The infestation at Charlottesville, Va., can probably be accounted for in the same way. Beetles were first found at Charlottesville in 1932. This year 60 beetles were trapped in that city. The locations at which were trapped 6 beetles in Chicago, Ill., and 1 beetle in East St. Louis, Ill., point to the probability of these having been transported from the heavily infested sections of New Jersey or Pennsylvania via rail in refrigerator cars containing agricultural products not ordinarily subject to infestation.

Funds were available only for trapping to determine spread in those States immediately adjacent to known infested territory. Supplementing the State surveys in nonregulated territory in Maine, New York, Pennsylvania, Ohio, West Virginia, Virginia, and Maryland, traps were operated to check previously determined infestations in Detroit, Mich., St. Louis, Mo., and Greenville, S.C., and to determine the presence of the insect in Chicago and East St. Louis, Ill., and a few selected cities in Indiana. The season's trapping program began in Virginia on June 18. Trap distribution progressed northward, following the dates of probable beetle emergence. The latest traps set were those placed in Maine. Except in cities where continued catches were being made, most of the traps were lifted after a 30-day period of operation. Final lifting of the late-operated traps in Maine was accomplished by September 21. Prior to this season's use, the traps were reconditioned and coated with aluminum paint. Since this protective coating weathered much better than the green and white enamel combination used previously, the traps, at the end of this season's work, were stored in municipal and county-owned buildings from which they may be readily distributed to adjacent territory next season. Curtailment of funds allowed the operation of only 31,000 of the project's supply of 56,000 traps.

The St. Louis infestation is now known to have existed since 1932, but the section involved was not surveyed because the presence of the insect in the city was not reported to this Bureau until early in 1934. Approximately 2,600 traps were concentrated in all likely infested sections from June 19 to August 25 of this year, with the resulting capture of 1,351 beetles. Funds recently made available by executive order have enabled the Bureau to start immediate application of thorough control measures in all infested sections of St. Louis. This work was begun on September 26 and is still in progress. Approximately 250 tons of lead arsenate are available for treating all of the 117 infested blocks at the rate of 1,000 pounds per acre. This is the largest control program ever undertaken at an



isolated infestation. Laborers to assist in applying the spray are being supplied by the local relief administration. The city fire department is assisting through the loan of hose lines. State and city officials are actively cooperating with the Bureau in this control work. Scouting of nursery and greenhouse establishments within a 10-mile radius of St. Louis gave negative results. A State quarantine on the movement of host material from infested sections will also be enforced.

It is also anticipated that lead arsenate will be applied to the limited sections found infested in Indianapolis, Ind., and in Charlottesville, Va.

When beetles were first found in Erie, Pa., in the summer of 1931, 170 specimens were collected. Following the capture of 282 beetles in 1932, all infested sections were given heavy applications of arsenate of lead to render the soil toxic to the beetle in the larval stage. In 1933, 167 beetles were caught in the city, but only 10 were found in the previously infested blocks. In a single block where 200 beetles had been captured the previous year, only 6 specimens were caught. As new infestations were determined outside the treated sections, additional poison was applied. This summer, with a still larger concentration of traps, only 114 beetles were captured. Forty-three of this total were survivors of infestations discovered in 1933 and first treated in the fall of that year. The remainder represents spread not previously determined. The significant feature of the control work in Erie is that intensive trapping in the older infested section of over 44 acres, where the soil has been poisoned for a period of 2 or more years, has disclosed only 3 beetles emerging from the entire area. This apparently progressive reduction in beetle population in a residential district affording favorable environment for rapid multiplication of the pest and difficult conditions for thoroughly treating every square foot of soil in which the insect might overwinter, is very encouraging from a control standpoint. Continuing the intensive eradication measures of previous years in Erie, the sections surrounding infestations found this year in unpoisoned areas were treated with lead arsenate at the rate of 1,000 pounds per acre. This treatment, involving the application of the soil insecticide to 6.6 acres, was accomplished between September 10 and 17, immediately after the traps were lifted for the season.

Although Waterville, Maine, was included within the regulated zone in an extension of territory effective as a result of the spread determined in 1933, trapping was repeated there again this year to learn whether the past winter's record-breaking subzero weather had killed off the overwintering grub population. Instead of 204 traps being operated for 30 days, as in 1933, this year 300 traps were operated for 40 days; and, whereas last year 139 beetles were trapped, this year's capture increased to 299. Apparently the soil temperature at a depth of 6 inches or more did not decline sufficiently to affect larval survival.

Under a campaign initiated by the New Jersey State Board of Agriculture, 510 large-sized Japanese beetle traps were sold to individuals throughout the State and to other purchasers in Norfolk and Richmond, Va., West Grove and Allentown, Pa., Bronxville, N.Y., and

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Stamford, Conn. The type of trap sold was one not available through commercial channels. By disposing of them at cost, the committee was able to retail the traps at \$1.50 each.

Dense flight of the beetle in heavily infested sections occurred this year approximately 10 days to 2 weeks in advance of the insect's customary maximum appearance. By July 4, in densely infested sections of southern New Jersey, beetles had balled on early apples, and browning of the foliage of badly devoured trees was plainly evident from a distance. By July 10 the foliage of many trees was completely skeletonized in the Shiloh section. Beetle activity reached its peak by the middle of July. The adults rapidly diminished in numbers after the first week in August.

The wavelike manner in which the beetle theoretically builds up and diminishes has not materialized in southern New Jersey. In this heavily infested agricultural area, sections that for years have been subject to intensive beetle damage are still holding their maximum populations. For three consecutive years early maturing apples in certain orchards have been rendered unsalable by beetle feeding. In the Philadelphia waterfront district in 1933, the expected heavy flight of the adult did not occur, indicating that the insect was on the wane in the business section of the city. This summer the insect resumed its heavy flight in the wharf and market districts, contradicting previous conclusions that the population might have decreased permanently. This year's adult flight lasted for nearly 5 weeks, from July 11 to August 13.

Beetle feeding in one block of 1,200 Yellow Transparent apples located in southern New Jersey was responsible for almost complete destruction of the crop. In 1933, 3,600 bushels were harvested from the orchard. This year but 36 bushels could be picked. Other severe commercial damage was evident throughout the densely infested sections.

Flotations of adult beetles in Delaware Bay, Raritan Bay, and the Atlantic Ocean were again observed, but not to the same extent as occurred last year. The flotation from New Jersey to the Delaware shore on Delaware Bay was most pronounced in mid-July. Beetles were washed up on the beaches of Long Island on August 10.

Nursery and greenhouse scouting this season resulted in the finding of adult beetles on a larger number of theretofore uninfested premises than were determined as infested in 1933. This season, infestations were found for the first time on 64 classified establishments, as compared with first-record finds on 33 such premises the preceding summer. Beetles have been found on the premises of over 80 percent of the nearly 400 classified establishments in New Jersey. This condition is a result of natural spread of the insect and expansion of its area of continuous distribution by about 900 square miles. Among 2,326 nurseries and greenhouses now fulfilling the quarantine requirements for classification, 528 are infested and the owners are obliged to grow their stock under beetle-proof conditions, and either to free it from soil or fumigate it before shipping to noninfested territory.



As in 1933, green beans were again shipped in large quantities to drought-stricken Midwestern markets from the bean-growing sections in southern New Jersey, in Morrisville and Bustleton, Pa., surrounding Baltimore, Md., and on the Eastern Shores of Maryland and Virginia. All beans shipped under certification from these areas were run through cylindrical inspection machines to rid them of beetles. Thousands of beetles were thus prevented from moving to noninfested States.

Evidence that adult beetles were flying into refrigerator cars while the cars were being loaded with certified beans, led to a temporary suspension of such shipments from Cedarville, N.J., from July 12 to 16. Shipping was resumed after beetle-proof enclosures had been constructed, under which inspected beans were loaded directly into refrigerator cars. Prior to loading, each car was searched for beetles, after which the side and ice bunker doors were kept closed or adequately screened.

From the knowledge gained as a result of the season's observations of accidental adult infestation of iced and uniced refrigerator cars loaded in the area of heavy flight, the Bureau is in a position at the first sign of such a flight next season to impose effective protective measures to prevent the entrance of the flying beetles into cars destined to distant markets.

From the accompanying list detailing the negative and positive results of this season's trapping activities, it will be noted that additional catches were recorded in 5 cities in Maine; in 58 Maryland communities, both inside and outside the regulated zone; in Detroit, Mich., where a few beetles have been trapped each year since 1932; in 9 New York cities; in 6 localities in Ohio; at Erie, Pa., where an infestation was first determined in 1931; in 6 cities in Virginia; and at 7 points in West Virginia. Traps set in Greenville, S.C., in an effort to pick up additional beetles at the site where 2 beetles were collected by hand, failed to catch any further specimens. Practically all of the few first-record infestations found in these States consisted of a few beetles each. None of them clearly pointed to an established infestation. The remaining infestations were largely survivors of known incipient infestations which successive years' trappings have shown not to have built up. There is also attached a supplementary list showing comparative results of trap activities as carried on in successive years in important communities both within and outside the present regulated zone.

JAPANESE BEETLE TRAPPING REPORT

SEASON 1934



ILLINOIS 1/

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Chicago 2/-----	July 23	1,038	July 31	Aug. 5-11	Aug. 23	6	Aug. 28
East St. Louis 2/	July 5	804	July 16	--	--	1	Aug. 18
Total-----	--	1,842	--	--	--	7	--

1/ 2 locations trapped, both showing positive results.

2/ First record.

INDIANA 1/

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Gibson-----	July 20	100	--	--	--	--	Aug. 23
Indianapolis 2/-	July 5	792	July 19	July 22-28	Aug. 2	17	Aug. 30
Indiana Harbor--	July 20	53	--	--	--	--	Aug. 23
Total-----	--	945	--	--	--	17	--

1/ 3 locations trapped, 1 showing positive results.

2/ First record.

MAINE

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Inside the regulated area 1/:							
Waterville-----	Aug. 1	300	Aug. 7	Aug. 15-21	Aug. 13	299	Sept. 12
Outside the regulated area 2/:							
Auburn 3/-----	July 23	192	Aug. 6	Aug. 5-11	Sept. 12	10	Sept. 12
Augusta-----	July 30	204	Aug. 27	--	--	1	Sept. 15
Bangor-----	July 28	204	--	--	--	--	Sept. 20
Bar Harbor-----	July 24	201	--	--	--	--	Sept. 13
Bath-----	July 24	202	--	--	--	--	Sept. 18
Belfast-----	Aug. 6	96	--	--	--	--	Sept. 14
Bridgton-----	July 24	48	--	--	--	--	Sept. 14
Brunswick-----	July 27	120	--	--	--	--	Sept. 20
Camden-----	Aug. 15	3	--	--	--	--	Sept. 15
Fryeburg-----	July 26	29	--	--	--	--	Sept. 13
Gardiner-----	Aug. 1	108	--	--	--	--	Sept. 15
Gorham 3/-----	Aug. 4	30	Aug. 11	Sept. 5-11	Sept. 10	7	Sept. 15
Harrison-----	July 28	19	--	--	--	--	Sept. 13



MAINE --- Continued

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Lewiston 3/-----	July 26	204	Aug. 8	Aug. 19-25	Sept. 8	7	Sept. 13
Naples-----	Aug. 7	11	--	--	--	--	Sept. 14
Norway-----	July 30	101	--	--	--	--	Sept. 12
North Bridgton--	Aug. 4	17	--	--	--	--	Sept. 13
Rockland-----	Aug. 2	204	--	--	--	--	Sept. 13
South Paris-----	Aug. 3	30	--	--	--	--	Sept. 11
South Windham---	Aug. 6	6	--	--	--	--	Sept. 15
Yarmouth-----	Aug. 1	59	--	--	--	--	Sept. 21
Total-----	--	2,388	--	--	--	324	--

1/ 1 location trapped inside the regulated area, showing positive results.

2/ 21 locations trapped outside the regulated area, 4 showing positive results.

3/ First record.

MARYLAND

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Inside the regulated area 1/:							
Aberdeen-----	June 23	100	July 6	July 15-21	Aug. 1	7,276	Aug. 8
Abingdon-----	June 22	10	July 18	July 22-28	Aug. 2	6	Aug. 8
Annapolis-----	June 21	273	June 26	July 1-7	July 24	111	Aug. 3
Annapolis (New style traps)---	July 23	49	--	--	--	--	Aug. 3
Bel Air-----	June 28	150	July 5	July 8-14	Aug. 6	452	Aug. 6
Berlin-----	June 28	50	July 14	July 8-14	July 21	8	July 30
Berwyn-----	June 29	25	July 5	July 8-14	July 11	5	July 27
Bethesda-- (Chevy Chase)---	June 25	239	July 2	July 1-7	July 26	91	Aug. 2
Bladensburg-----	July 2	25	July 6	July 8-14	July 24	79	July 31
Brunswick-----	June 27	200	July 16	July 15-21	July 24	5,120	Aug. 6
Cambridge-----	June 21	600	June 25	July 8-14	Aug. 6	13,446	Aug. 6
Centerville-----	June 26	96	July 6	July 1-7	July 24	131	July 30
Chesapeake City--	June 21	100	July 2	July 1-7	Aug. 10	11,070	Aug. 13
Chestertown-----	June 25	125	July 3	July 8-14	July 23	245	July 27
Church Hill-----	June 27	15	--	--	--	--	Aug. 24
Churchville-----	June 22	10	--	--	--	--	Aug. 6
Colgate-----	June 22	477	July 3	July 1-7	Aug. 7	258,850	Aug. 7
Conowingo-----	June 21	15	July 3	July 1-7	Aug. 6	2,307	Aug. 6
Cumberland -----	June 26	300	July 3	July 20-25	Aug. 22	81	Aug. 23
Delmar-----	June 23	150	June 30	July 15-21	July 23	10,564	Aug. 1



MARYLAND -- Continued

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Denton-----	June 23	150	July 5	July 5-12	July 20	9	Aug. 1
Easton-----	June 25	250	June 29	July 8-14	July 25	299	Aug. 1
Elk Mills-----	July 3	13	July 9	July 15-21	Aug. 10	5,900	Aug. 10
Elkton-----	June 22	987	July 2	July 15-21	Aug. 16	3,140,700	Aug. 16
Ellicott City--	June 22	75	July 13	July 15-21	July 31	80	July 31
Essex-----	June 22	120	July 9	July 8-14	Aug. 8	1,907	Aug. 8
Frostburg-----	June 28	42	--	--	--	--	July 27
Gaithersburg---	June 21	51	July 6	July 8-14	July 23	6	Aug. 1
Greensboro-----	June 22	25	July 17	July 22-28	July 25	3	July 28
Hagerstown-----	June 29	899	July 7	July 8-14	Aug. 2	1,864	Aug. 9
Havre de Grace--	June 27	145	July 7	July 8-14	Aug. 9	2,528	Aug. 9
Havre de Grace (New style traps)-----	July 21	50	July 24	July 22-28	Aug. 9	153	Aug. 9
Hyattsville-----	June 23	100	June 26	July 8-14	July 30	229	July 30
Laurel-----	June 21	300	June 25	July 1-7	Aug. 1	365	Aug. 1
Millington-----	June 22	20	July 18	--	July 18	3	July 28
Oxford-----	June 21	25	July 13	--	July 13	2	July 27
Perry Point-----	June 21	25	June 21	July 1-7	Aug. 6	33,370	Aug. 6
Pocomoke City--	June 29	50	July 5	July 15-21	July 20	42	July 31
Princess Anne--	June 26	100	July 5	July 1-7	July 19	51	July 28
Queen Anne (Queen Annes County)	June 27	22	July 12	July 12-17	July 17	2	July 31
Ridgely-----	June 27	25	July 12	--	--	1	July 30
Rising Sun-----	June 22	15	July 3	July 1-7	Aug. 4	280	Aug. 10
Riverdale-----	June 30	50	July 5	July 8-14	July 24	105	July 31
Salisbury-----	June 21	200	July 10	July 15-21	July 24	25	Aug. 2
Silver Spring--	June 23	50	July 2	July 1-7	July 25	45	July 27
Snow Hill-----	June 29	50	July 20	--	July 20	4	July 31
Sudlersville---	June 21	27	June 29	July 1-7	July 24	437	July 31
Takoma Park----	June 22	51	July 2	July 15-21	July 21	14	July 30
Westminster----	June 25	244	July 3	July 15-21	Aug. 2	54	Aug. 2
Weverton-----	June 21	10	July 17	July 15-21	July 22	10	Aug. 1
Outside the regulated area 2/:							
Cockeysville---	June 21	25	--	--	--	--	July 27
East New Market-	June 22	25	--	--	--	--	July 28
Emmitsburg-----	June 24	50	--	--	--	--	July 27
Federalsburg---	June 26	75	July 2	July 19-26	July 24	10	July 31
Frederick-----	June 26	100	July 20	July 15-21	July 26	14	July 31
Hancock 3/-----	June 29	24	July 17	--	July 17	2	July 31
Hughesville-----	June 20	20	--	--	--	--	July 30
Hurlock-----	June 22	25	July 5	July 8-14	July 23	10	July 27
La Plata 3/-----	June 26	25	July 5	July 8-14	July 14	3	July 30
Leonardtown-----	June 26	25	--	--	--	--	July 30



MARYLAND --- Continued

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Mechanicsville--	June 26	10	--	--	--	--	July 30
Middletown-----	June 21	50	--	--	--	--	Aug. 1
Mount Airy-----	June 21	50	July 17	July 15-21	July 20	2	July 27
Preston-----	June 21	25	--	--	--	--	July 27
Queen Anne (Talbot County)---	June 27	3	July 12	--	--	1	July 31
Reisterstown----	June 25	40	--	--	--	--	July 30
Rockville-----	June 22	50	July 6	--	July 6	2	July 28
Solomon's Island	June 30	11	July 25	--	--	1	Sept. 8
Sykesville-----	June 22	50	June 29	July 8-14	July 25	12	July 27
Taneytown-----	June 23	75	--	--	--	--	July 30
Thurmont- <sup>3/</sup> -----	June 25	50	July 18	--	--	1	July 28
Upper Marlboro <sup>3/</sup> ---	June 25	24	June 29	--	June 29	2	Aug. 1
Western Port ---	July 2	44	--	--	--	--	July 27
Total-----	--	8,056	--	--	--	3,498,390	--

1/ 48 locations trapped inside the regulated area, 45 showing positive results.

2/ 23 locations trapped outside the regulated area, 12 showing positive results.

3/ First record.

MICHIGAN 1/

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Detroit-----	July 2	792	July 27	Aug. 10-16	Aug. 23	10	Sept. 10
Total-----	--	792	--	--	--	10	--

1/ 1 location trapped, showing positive results.

MISSOURI 1/

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
St. Louis <u>2/</u> -----	June 19	2,604	June 19	July 1-7	Aug. 21	1,351	Aug. 25
Total-----	--	2,604	--	--	--	1,351	Aug. 25

1/ 1 location trapped in Missouri, showing positive results

2/ First record.



NEW YORK 1/

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Auburn-----	July 24	204	--	--	--	--	Aug. 25
Batavia-----	July 27	84	--	--	--	--	Aug. 29
Buffalo-----	July 20	396	--	--	--	--	Aug. 29
Dansville-----	July 17	60	--	--	--	--	Aug. 20
East Aurora-----	July 27	60	--	--	--	--	Aug. 27
Geneva 2/-----	July 23	132	Aug. 1	--	--	1	Aug. 23
Hornell-----	July 16	204	Aug. 13	--	Aug. 23	2	Aug. 23
Ithaca-----	July 18	200	July 31	July 31- Aug. 7	Aug. 21	3	Aug. 21
Jamestown-----	July 17	287	--	--	--	--	Aug. 22
Lockport-----	July 26	196	--	--	--	--	Aug. 31
Medina 3/-----	July 26	60	Aug. 1	--	--	1	Aug. 28
Niagara Falls---	July 23	396	Aug. 23	--	--	1	Sept. 1
Olean-----	July 16	204	Aug. 20	--	Aug. 20	2	Aug. 21
Oswego-----	July 26	204	Aug. 22	--	--	1	Aug. 30
Penn Yan-----	July 20	96	--	--	--	--	Aug. 20
Rochester-----	July 24	396	Aug. 6	--	Aug. 6	2	Aug. 28
Seneca Falls----	July 21	60	--	--	--	--	Aug. 24
Watkins Glen----	July 19	100	Aug. 9	Aug. 5-11	Aug. 20	5	Aug. 21
Wellsville-----	July 16	131	--	--	--	--	Aug. 22
Westfield-----	July 18	96	--	--	--	--	Aug. 21
Total-----	--	3,566	--	--	--	18	--

1/ 20 locations trapped, 9 showing positive results.

2/ Property owner informed trap tender that beetle was removed from automobile and placed in trap, not a trap collection.

3/ First record.

OHIO 1/

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Alliance-----	July 16	204	--	--	--	--	Aug. 20
Ashtabula-----	July 23	100	--	--	--	--	Aug. 25
Canton-----	July 19	204	July 31	--	--	1	Aug. 21
Chillicothe-----	July 14	132	--	--	--	--	Aug. 14
Circleville-----	July 12	132	--	--	--	--	Aug. 13
Cleveland-----	July 17	396	July 25	--	--	--	Aug. 23
Columbus-----	July 17	396	July 31	Aug. 5-11	Aug. 14	4	Aug. 21
Conneaut-----	July 24	100	--	--	--	--	Aug. 24
East Liverpool 2/	July 9	204	Aug. 8	--	Aug. 8	2	Aug. 14
Painesville-----	July 20	196	--	--	--	--	Aug. 22



OHIO -- Continued

Location	Trap setting started	Traps operated	First beetle	Peak week	Last beetle	Beetles trapped	Trap removal completed
		Number				Number	
Steubenville----	July 9	204	July 16	Aug. 2-8	Aug. 8	3	Aug. 13
Warren-----	July 13	204	--	--	--	--	Aug. 17
Washington Court House---	July 11	132	--	--	--	--	Aug. 15
Youngstown-----	July 14	396	July 27	--	July 27	2	Aug. 17
Total-----	--	3,000	--	--	--	13	--

1/ 14 locations trapped, 6 showing positive results.  
 2/ First record.

PENNSYLVANIA 1/

Location	Trap setting started	Traps operated	First beetle	Peak week	Last beetle	Beetles trapped	Trap removal completed
		Number				Number	
Erie -----	July 6	1,427	July 14	July 22-28	Aug. 30	114	Sept. 8
Total-----	--	1,427	--	--	--	114	--

1/ 1 location trapped, showing positive results.

SOUTH CAROLINA 1/

Location	Trap setting started	Traps operated	First beetle	Peak week	Last beetle	Beetles trapped	Trap removal completed
		Number				Number	
Greenville-----	July 23	204	--	--	--	2/ 2	Aug. 16
Total -----	--	204	--	--	--	2	--

1/ 1 location trapped.  
 2/ Hand collection, previous to date traps were set.

VIRGINIA 1/

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Ashland-----	June 21	102	--	--	--	--	July 28
Berryville-----	July 2	36	--	--	--	--	Aug. 4
Blackstone-----	June 21	48	--	--	--	--	July 23
Bowling Green----	June 20	36	--	--	--	--	July 23
Charlottesville--	June 22	204	June 30	June 24-30	July 23	60	Aug. 3
Culpeper-----	June 27	60	July 11	July 8-14	July 20	5	Aug. 8
Danville-----	June 20	204	--	--	--	--	Aug. 2
Elkton-----	June 26	15	--	--	--	--	Aug. 3
Emporia-----	June 20	60	June 27	July 1-7	July 12	7	Aug. 15
Front Royal-----	July 6	48	--	--	--	--	Aug. 3
Golansville-----	June 20	6	--	--	--	--	July 23
Gordonsville-----	June 28	24	--	--	--	--	Aug. 1
Harrisonburg-----	June 23	228	--	--	--	--	Aug. 1
Hopewell-----	June 18	180	--	--	--	--	July 27
Kenbridge-----	June 21	12	--	--	--	--	Aug. 14
Lawrenceville----	June 21	24	--	--	--	--	Aug. 14
Leesburg-----	June 29	36	--	--	--	--	Aug. 6
Luray-----	June 25	40	--	--	--	--	Aug. 4
Lynchburg-----	June 23	192	--	--	--	--	Aug. 4
Madison-----	June 29	12	--	--	--	--	Aug. 3
Manassas-----	June 30	36	--	--	--	--	Aug. 4
Marshall-----	June 30	12	--	--	--	--	Aug. 2
Martinsville-----	June 25	96	--	--	--	--	July 31
Mechanicsville---	June 21	12	--	--	--	--	July 24
Milford-----	June 20	12	--	--	--	--	July 23
Mount Jackson----	June 25	12	--	--	--	--	Aug. 2
New Market-----	June 25	25	--	--	--	--	Aug. 4
Orange-----	June 28	48	--	--	--	--	Aug. 1
Petersburg-----	June 18	216	--	--	--	--	Aug. 16
Remington-----	June 29	12	--	--	--	--	Aug. 3
Roanoke-----	June 26	204	July 2	July 15-21	Aug. 1	9	Aug. 1
Shenandoah-----	June 26	40	--	--	--	--	Aug. 3
South Boston-----	June 22	96	--	--	--	--	July 26
Sperryville-----	July 5	12	--	--	--	--	Aug. 2
Spotsylvania-----	June 27	12	--	--	--	--	July 23
Staunton-----	June 21	192	--	--	--	--	Aug. 9
Strasburg-----	July 2	36	--	--	--	--	Aug. 2
The Plains-----	June 29	12	--	--	--	--	Aug. 2
Wakefield-----	June 20	12	--	--	--	--	July 24



VIRGINIA -- Continued

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Warrenton-----	June 27	36	July 13	July 8-14	July 28	10	Aug. 7
Waverly-----	June 20	24	--	--	--	--	July 24
Williamsburg-----	June 19	35	--	--	--	--	July 24
Winchester-----	June 28	276	July 12	July 23- Aug. 1	Aug. 1	6	Aug. 9
Woodstock-----	June 25	36	--	--	--	--	Aug. 6
Total-----	--	3,071	--	--	--	97	--

1/ 44 locations trapped, 6 showing positive results.

WEST VIRGINIA 1/

Location	Trap setting started	Traps operated Number	First beetle	Peak week	Last beetle	Beetles trapped Number	Trap removal completed
Berkeley Springs <sup>2/</sup>	July 5	36	Aug. 8	--	--	1	Aug. 8
Bluefield-----	June 28	228	--	--	--	--	Aug. 2
Charleston-----	July 3	396	--	--	--	--	Aug. 9
Charles Town-----	July 4	36	--	--	--	--	Aug. 7
Clarksburg-----	July 6	132	July 30	--	--	1	Aug. 4
Fairmont-----	July 7	132	July 18	July 15-21	Aug. 9	19	Aug. 10
Martinsburg-----	July 3	264	July 18	July 15-21	July 28	3	Aug. 10
Morgantown <sup>2/</sup> -----	July 6	120	July 10	--	--	1	Aug. 11
Princeton-----	June 29	168	July 11	July 16-25	July 30	6	Aug. 4
Ranson-----	July 4	36	--	--	--	--	Aug. 7
Sheperdstown-----	July 4	24	--	--	--	--	Aug. 7
Wheeling-----	July 10	396	July 20	--	July 25	2	Aug. 17
Total-----	--	1,968	--	--	--	33	--

1/ 12 locations trapped, 7 showing positive results.

2/ First record.



Traps were operated by States as follows:

Location	Beetles trapped	
	Number	Totals for States
Connecticut:		
Ansonia-----	172	
Wallingford-----	13	185
Delaware:		
Bayview-----	47,850	
Clayton-----	96,460	
Delmar-----	18,984	
Dover-----	36,009	
Lebanon-----	2	
Magnolia-----	221	
Middletown-----	11,199	
Milford-----	20	
Odessa-----	370	
Port Penn-----	39,600	
Reedy Point-----	5,981	
Smyrna-----	17,686	
Woodside-----	4	
Wyoming-----	1,280	275,666
Maryland:		
Baltimore-----	156,278	156,278
New Jersey:		
Andover-----	84	
Branchville-----	1	
Culvers-----	1	
Franklin-----	350	
Hamburg-----	35	
Hopatcong-----	35	
Mohawk-----	38	
Netcong-----	35	
Newton-----	138	
Ogdensburg-----	3	
Sparta-----	1	
Stanhope-----	67	
Sussex-----	21	
Swartswood-----	17	826
Pennsylvania:		
Harrisburg-----	139,576	
Summerdale-----	28,050	167,626



COMPARATIVE JAPANESE BEETLE DATA FOR CITIES AND TOWNS WHERE BEETLES  
HAVE BEEN COLLECTED IN TRAPS IN PREVIOUS YEARS AND WHERE THEY  
HAVE BEEN TRAPPED WITH POSITIVE RESULTS IN 1934



COMPARATIVE JAPANESE BEETLE DATA FOR CITIES AND TOWNS WHERE BEETLES  
HAVE BEEN COLLECTED IN TRAPS IN PREVIOUS YEARS AND WHERE THEY  
HAVE BEEN TRAPPED WITH POSITIVE RESULTS IN 1934

MARYLAND

Location	Year	Traps	Date trap work was		Beetles trapped
			Started	Finished	
		Number			Number
Aberdeen.....	1929	250	July 31	Aug. 29	13
Do. ....	1930	200	June 26	Aug. 14	131
Do. ....	1931	100	June 8	Aug. 6	140
Do. ....	1932	110	June 8	Aug. 25	624
Do. ....	1933	100	July 3	Sept. 1	2,232
Do. ....	1934	100	June 23	Aug. 8	7,276
Annapolis.....	1931	300	July 24	Aug. 28	3
Do. ....	1932	204	June 7	Aug. 18	15
Do. ....	1933	144	June 20	Aug. 31	77
Do. ....	1934	273	June 21	Aug. 3	111
Bel Air.....	1929	150	Aug. 9	Aug. 28	2
Do. ....	1930	100	June 27	Aug. 14	118
Do. ....	1931	200	June 8	Aug. 26	10
Do. ....	1932	190	June 13	Aug. 23	194
Do. ....	1933	100	June 29	Aug. 30	305
Do. ....	1934	150	June 28	Aug. 6	452
Berlin.....	1931	100	June 1	Aug. 28	30
Do. ....	1932	100	June 7	Aug. 20	19
Do. ....	1933	99	June 12	Aug. 22	19
Do. ....	1934	50	June 28	July 30	8
Brunswick.....	1929	250	Aug. 23	Sept. 24	5
Do. ....	1930	250	June 26	Aug. 14	757
Do. ....	1931	250	June 17	Aug. 18	222
Do. ....	1932	100	June 7	Aug. 20	2,437
Do. ....	1933	250	June 27	Sept. 1	1,024
Do. ....	1934	200	June 27	Aug. 6	5,120
Cambridge.....	1929	1,000	June 30	Aug. 31	911
Do. ....	1930	2,000	June 20	Aug. 15	2,087
Do. ....	1931	100	June 1	Aug. 19	2,181
Do. ....	1932	600	June 13	Aug. 24	4,930
Do. ....	1933	580	June 17	Sept. 1	16,186
Do. ....	1934	600	June 21	Aug. 6	13,446
Chesapeake City.....	1931	100	June 1	Aug. 27	3,062
Do. ....	1932	100	June 16	Aug. 29	6,075
Do. ....	1933	200	June 26	Sept. 6	8,457
Do. ....	1934	100	June 21	Aug. 13	11,070



MARYLAND--Continued

Location	Year	Traps Number	Date trap work was		Beetles trapped Number
			Started	Finished	
Chestertown.....	1929	250	June 22	Aug. 31	4
Do. ....	1930	250	June 23	Aug. 15	38
Do. ....	1931	100	June 1	Aug. 25	6
Do. ....	1932	100	June 16	Aug. 27	98
Do. ....	1933	100	June 24	Sept. 1	311
Do. ....	1934	125	June 25	July 27	245
Chevy Chase.....	1931	15	Aug. 10	Aug. 27	0
Do. ....	1932	124	June 18	Aug. 15	8
Do. ....	1933	198	July 6	Aug. 15	19
Do. ....	1934	239	June 25	Aug. 2	91
Colgate.....	1931	250	June 21	Aug. 22	4,324
Do. ....	1932	300	June 3	Sept. 1	54,044
Do. ....	1933	600	June 23	Sept. 2	233,293
Do. ....	1934	477	June 22	Aug. 7	258,850
Delmar.....	1929	250	June 5	Sept. 5	608
Do. ....	1930	500	June 24	Aug. 12	495
Do. ....	1931	175	June 1	Sept. 2	1,174
Do. ....	1932	300	June 10	Sept. 3	6,632
Do. ....	1933	198	June 13	Aug. 31	10,442
Do. ....	1934	150	June 23	Aug. 1	10,564
Easton.....	1931	100	June 1	Sept. 3	4
Do. ....	1932	100	June 15	Aug. 29	31
Do. ....	1933	252	June 21	Sept. 1	166
Do. ....	1934	250	June 25	Aug. 1	299
Federalsburg.....	1932	171	June 18	Aug. 13	6
Do. ....	1933	51	June 21	Aug. 28	4
Do. ....	1934	75	June 26	July 31	10
Hagerstown.....	1929	250	May 28	Sept. 5	47
Do. ....	1930	750	June 14	Aug. 16	373
Do. ....	1931	900	June 27	Aug. 18	118
Do. ....	1932	900	June 16	Aug. 19	998
Do. ....	1933	900	June 23	Sept. 1	2,555
Do. ....	1934	899	June 29	Aug. 9	1,864
Laurel.....	1931	300	June 24	Aug. 29	75
Do. ....	1932	300	June 11	Aug. 20	182
Do. ....	1933	300	June 22	Aug. 31	160
Do. ....	1934	300	June 21	Aug. 1	365



MARYLAND--Continued

Location	Year	Traps	Date trap work was		Beetles trapped
			Started	Finished	
		Number			Number
Oxford.....	1929	250	July 23	Aug. 30	0
Do. ....	1930	250	June 19	Aug. 14	16
Do. ....	1931	150	June 1	Aug. 22	8
Do. ....	1932	100	June 17	Aug. 24	6
Do. ....	1933	51	June 21	Aug. 29	3
Do. ....	1934	25	June 21	July 27	2
Pocomoke City.....	1931	100	June 1	Aug. 27	183
Do. ....	1932	110	June 6	Aug. 24	195
Do. ....	1933	99	June 14	Aug. 30	107
Do. ....	1934	50	June 29	July 31	42
Princess Anne .....	1931	6	July 31	Aug. 27	6
Do. ....	1932	60	June 10	Aug. 23	247
Do. ....	1933	99	June 14	Aug. 25	301
Do. ....	1934	100	June 26	July 28	51
Salisbury.....	1931	100	June 1	Aug. 26	18
Do. ....	1932	240	June 8	Aug. 24	91
Do. ....	1933	204	June 13	Aug. 25	117
Do. ....	1934	200	June 21	Aug. 2	25
Weverton.....	1931	100	June 27	Aug. 18	2
Do. ....	1932	84	June 14	Aug. 24	2
Do. ....	1933	26	June 28	Sept. 2	2
Do. ....	1934	10	June 21	Aug. 1	10

MICHIGAN

Detroit.....	1931	100	July 6	Sept. 5	0
Do. ....	1932	389	Aug. 15	Sept. 7	8
Do. ....	1933	1,042	Aug. 8	Oct. 2	4
Do. ....	1934	792	July 2	Sept. 10	10

NEW YORK

Watkins Glen.....	1931	200	Aug. 17	Sept. 19	3
Do. ....	1932	392	July 26	Sept. 9	1
Do. ....	1933	192	Aug. 10	Sept. 11	3
Do. ....	1934	100	July 19	Aug. 21	5



OHIO

Location	Year	Traps	Date trap work was		Beetles trapped
			Started	Finished	
		<u>Number</u>			<u>Number</u>
Cleveland.....	1931	300	July 6	Sept. 1	1
Do. ....	1932	392	July 5	Sept. 8	9
Do. ....	1933	814	Aug. 2	Oct. 2	0
Do. ....	1934	396	July 17	Aug. 23	1
Columbus.....	1931	300	June 29	Sept. 19	5
Do. ....	1932	796	July 6	Sept. 11	20
Do. ....	1933	792	Aug. 9	Sept. 22	7
Do. ....	1934	396	July 17	Aug. 21	4

PENNSYLVANIA

Erie.....	1931	600	Aug. 18	Sept. 19	29
Do. ....	1932	774	July 12	Sept. 6	282
Do. ....	1933	1,280	July 20	Oct. 4	167
Do. ....	1934	1,427	July 6	Sept. 8	114

VIRGINIA

Charlottesville.....	1932	400	June 21	Aug. 15	7
Do. ....	1933	308	July 7	Aug. 30	6
Do. ....	1934	204	June 22	Aug. 3	60
Culpeper.....	1933	60	July 13	Sept. 1	6
Do. ....	1934	60	June 27	Aug. 8	5
Emporia.....	1933	58	June 21	Aug. 22	3
Do. ....	1934	60	June 20	Aug. 15	7
Roanoke.....	1932	400	June 18	Aug. 10	23
Do. ....	1933	396	July 6	Aug. 28	7
Do. ....	1934	204	June 26	Aug. 1	9
Warrenton.....	1933	38	July 10	Aug. 31	1
Do. ....	1934	36	June 27	Aug. 7	10
Winchester.....	1932	186	June 24	Aug. 22	7
Do. ....	1933	296	July 12	Aug. 31	2
Do. ....	1934	276	June 28	Aug. 9	6

WEST VIRGINIA

Wheeling.....	1931	300	June 24	Sept. 3	0
Do. ....	1932	400	June 29	Sept. 2	1
Do. ....	1933	396	Aug. 14	Sept. 12	0
Do. ....	1934	396	July 10	Aug. 17	2